



Research Article

## Annual and seasonal rainfall variability of Aurad Taluk, Bidar district (Karnataka)

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### Summary

Rainfall data for the period 1976 - 2010 was used to analyze seasonal and annual variability of rainfall. The mean annual rainfall is 849.0 mm with 28 per cent variability; with standard deviation of 241.1 mm. The rainfall during 1981-1985 periods ranged from 487.0 mm to 1337.7 mm with a mean rainfall (772.1 mm). Pre-monsoon season rains were deficit in 16 years, excess in 13 years and normal in 6 years as against the normal rainfall of 69.0 mm, the SWM rainfall was normal in 4 years, excess in 13 years and deficit in 18 years while during post-monsoon season there was only two normal rainfall year, deficit in 18 years and excess in 15 years.

**Key words :** Annual and seasonal rainfall

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### Introduction

The success or failure of the crops in any year is always viewed with great anxiety as they are closely linked with the behavior of the south west monsoon rains received during June to September. Thus for a rainfed crop, rainfall is the only source of water and thereby any fluctuation in rainfall pattern adversely affect the crop production and it tilts the food security of the country. Water is one of the crucial inputs in crop production and its excess or deficit availability/application adversely influences the yield. Rainfall analysis for crop planning was carried out in different regions of the country as reported by Chaudhury and Tomar (1999); Sastri *et al.* (1999) and Sahoo *et al.* (1991). In this context, an attempt was made at Agriculture Research Station, Bidar, to analyze the rainfall variability in monthly, seasonally and annually for Aurad region.

### Resources and Research Methods

Daily rainfall data for the past 35 years (1976-2010) were collected from district Statistical Office, Bidar, for analysis. The rainfall data were critically examined for annual, seasonal and monthly values following the procedure of Panse and Sukhatme (1985). The standard deviation (SD) and coefficient of variance (CV) of rainfall were worked out for the above said periods. Drought intensity was classified as per IMD (Normal (N) rainfall mean  $\pm 10\%$ ; slight drought (-11 to -25% of N); moderate drought (-26 to -49 % of N) and severe drought (-50 % and above of N).

### Research Findings and Discussion

The rainfall of 35 years (Table 1, Fig. 1 and 2) ranged from 453.5.0 mm to 1337.7 mm with a mean of 849.0 mm. The